

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1062187

Luminaire Tested: S125RDR-H850D840-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1062187  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-46)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125RDR-H850D840-X4F0-XX-UDD-WVL-B  
Description: DEFINE 5 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

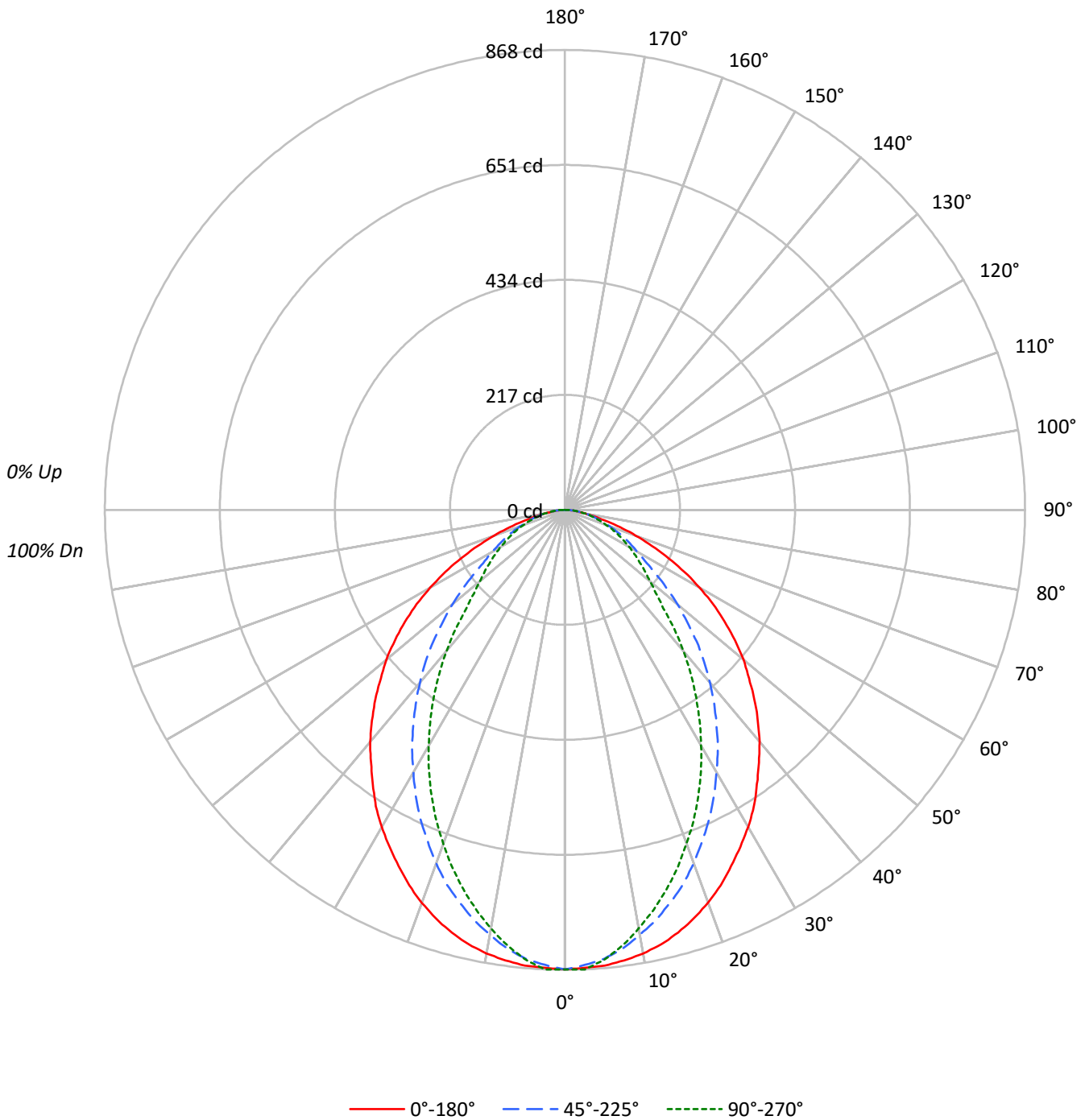
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1642.9 lumens  
Efficiency: N/A  
Efficacy: 69.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.95 / 1.11  
Luminous Opening: Rectangular (W 0.39' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20										
RC	80									70									50									30									10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0														
RCR																																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100															
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87					87															
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75					75															
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65					65															
4	86	76	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57					57															
5	80	68	60	54	78	67	59	54	65	58	53	63	57	53	61	56	52	50					50															
6	74	62	54	48	73	61	53	48	59	53	47	58	52	47	56	51	47	45					45															
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	40					40															
8	65	52	44	39	63	52	44	39	50	43	39	49	43	38	48	42	38	36					36															
9	61	48	41	35	60	48	40	35	47	40	35	46	39	35	45	39	35	33					33															
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	42	36	32	30					30															

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5971	5971	5971
5°	5968	5877	5890
10°	5945	5695	5609
15°	5886	5470	5283
20°	5782	5202	4912
25°	5637	4893	4521
30°	5495	4544	4087
35°	5310	4195	3625
40°	5138	3825	3123
45°	4923	3420	2558
50°	4710	2965	2239
55°	4420	2475	2068
60°	4032	2166	1932
65°	3529	1979	1795
70°	2863	1782	1669
75°	2054	1628	1554
80°	1419	1455	1455
85°	1043	1264	1335

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4923 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.6	4.9
10°-20°	218.1	13.3
20°-30°	301.4	18.3
30°-40°	321.1	19.5
40°-50°	282.0	17.2
50°-60°	213.9	13.0
60°-70°	138.9	8.5
70°-80°	68.8	4.2
80°-90°	18.0	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	600.2	36.5
0°-40°	921.3	56.1
0°-60°	1417.2	86.3
0°-90°	1642.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1642.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	867	867	867	867	867	
5°	864	862	850	853	852	82
15°	826	807	767	750	741	233
25°	742	702	644	611	595	342
35°	632	573	499	454	431	395
45°	506	435	351	288	263	390
55°	368	296	206	178	172	328
65°	217	161	122	112	110	214
75°	77	68	61	59	58	86
85°	13	15	16	16	17	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	867.2	867.2	867.2	867.2	867.2
2.5°	865.3	867.2	859.7	866.3	868.2
5°	863.5	861.6	850.3	853.1	852.2
7.5°	857.8	854.0	835.2	833.3	829.6
10°	850.3	840.9	814.5	807.9	802.3
12.5°	839.9	824.9	792.8	779.7	773.1
15°	825.8	807.0	767.4	749.5	741.1
17.5°	808.9	782.5	741.1	716.6	707.2
20°	789.1	758.0	710.0	681.7	670.4
22.5°	767.4	730.7	677.0	646.9	634.7
25°	742.0	701.5	644.1	611.1	595.1
27.5°	716.6	671.4	609.2	572.5	555.6
30°	691.1	639.4	571.6	532.0	514.1
32.5°	663.8	606.4	536.7	493.4	472.7
35°	631.8	573.4	499.1	453.9	431.3
37.5°	600.8	538.6	462.3	411.5	389.8
40°	571.6	505.6	425.6	370.1	347.5
42.5°	538.6	470.8	388.9	330.5	305.1
45°	505.6	435.0	351.2	288.1	262.7
47.5°	470.8	401.1	311.7	249.5	232.6
50°	439.7	366.3	276.8	220.3	209.0
52.5°	404.0	332.4	241.1	197.7	190.2
55°	368.2	295.7	206.2	178.0	172.3
57.5°	331.5	262.7	178.9	161.0	155.4
60°	292.8	228.8	157.3	143.1	140.3
62.5°	254.2	194.0	138.4	128.1	124.3
65°	216.6	161.0	121.5	112.1	110.2
67.5°	178.0	130.9	104.5	97.9	97.0
70°	142.2	106.4	88.5	84.7	82.9
72.5°	109.2	84.7	74.4	71.6	70.6
75°	77.2	67.8	61.2	59.3	58.4
77.5°	51.8	51.8	49.0	47.1	48.0
80°	35.8	37.7	36.7	36.7	36.7
82.5°	23.5	25.4	26.4	26.4	26.4
85°	13.2	15.1	16.0	16.0	16.9
87.5°	4.7	5.6	6.6	7.5	7.5
90°	0.0	0.0	0.0	0.0	0.0



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**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	16.76	18.25	17.13	18.57	18.88	13.00	14.49	13.37	14.81	15.12
	3H	18.07	19.41	18.45	19.74	20.10	14.59	15.92	14.96	16.25	16.61
	4H	18.44	19.70	18.84	20.04	20.42	15.19	16.44	15.59	16.79	17.17
	6H	18.62	19.77	19.03	20.14	20.53	15.66	16.82	16.07	17.18	17.58
	8H	18.66	19.76	19.08	20.15	20.55	15.82	16.92	16.25	17.31	17.71
	12H	18.67	19.72	19.10	20.10	20.53	15.93	16.98	16.36	17.37	17.80
4H	2H	16.87	18.13	17.27	18.48	18.85	13.66	14.92	14.06	15.27	15.65
	3H	18.36	19.40	18.77	19.80	20.20	15.45	16.48	15.86	16.88	17.29
	4H	18.84	19.77	19.27	20.19	20.62	16.16	17.10	16.60	17.51	17.95
	6H	19.12	19.93	19.58	20.38	20.84	16.75	17.56	17.21	18.01	18.47
	8H	19.19	19.95	19.66	20.39	20.86	16.96	17.72	17.42	18.16	18.63
	12H	19.23	19.91	19.71	20.39	20.86	17.11	17.79	17.60	18.27	18.74
8H	4H	18.92	19.68	19.38	20.12	20.59	16.47	17.23	16.94	17.68	18.14
	6H	19.28	19.91	19.78	20.40	20.88	17.18	17.81	17.68	18.30	18.78
	8H	19.40	19.96	19.91	20.47	20.96	17.46	18.02	17.98	18.53	19.02
	12H	19.49	19.98	20.00	20.47	21.04	17.69	18.19	18.20	18.68	19.24
12H	4H	18.91	19.59	19.40	20.07	20.54	16.50	17.18	16.98	17.66	18.13
	6H	19.29	19.85	19.80	20.36	20.85	17.23	17.79	17.75	18.30	18.79
	8H	19.45	19.94	19.96	20.43	21.00	17.57	18.06	18.08	18.56	19.12